

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the Claims:

- Claim 1. (Currently Amended) A medical device responsive to a generated field comprising:
a body;
a position sensor at a portion of the body, the position sensor having a core made of a Wiegand effect material; and a winding circumferentially positioned around the core, the position sensor receiving the generated field and providing signals that determine location coordinates of the portion of the body.
- Claim 2. (Currently Amended) The medical device according to Claim 1, wherein the location coordinates determined by the position sensor ~~is used to determine~~ comprise position coordinates.
- Claim 3. (Currently Amended) The medical device according to Claim 2, wherein the location coordinates determined by the position sensor ~~is also used to determine~~ further comprise orientation coordinates.
- Claim 4. (Previously Presented) The medical device according to Claim 1, wherein the position sensor maintains accuracy of ≤ 1 mm at temperatures greater than 75°C.
- Claim 5. (Previously Presented) The medical device according to Claim 4, wherein the position sensor maintains accuracy of ≤ 1 mm at temperatures at approximately 80°C.

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| Claim 6. (Previously Presented) | The medical device according to Claim 1, wherein the core has an outer diameter less than approximately 0.3mm. |
| Claim 7. (Previously Presented) | The medical device according to Claim 6, wherein the core has an outer diameter of about 0.25mm. |
| Claim 8. (Previously Presented) | The medical device according to Claim 7, wherein the winding is attached to the core. |
| Claim 9. (Previously Presented) | The medical device according to Claim 8, wherein a combination of the core and the winding has an outer diameter less than approximately 0.5mm. |
| Claim 10. (Previously Presented) | The medical device according to Claim 9, wherein the combination of the core and the winding have an outer diameter of about 0.4 mm. |
| Claim 11. (Previously Presented) | The medical device according to Claim 10, wherein the material of the core comprises cobalt. |
| Claim 12. (Previously Presented) | The medical device according to Claim 11, wherein the material of the core further comprises vanadium. |
| Claim 13. (Previously Presented) | The medical device according to Claim 12, wherein the material of the core further comprises iron. |
| Claim 14. (Previously Presented) | The medical device according to Claim 13, wherein the material of the core comprises approximately 20%-80% cobalt. |

- Claim 15. (Previously Presented) The medical device according to Claim 13, wherein the material of the core comprises approximately 2%-20% vanadium.
- Claim 16. (Previously Presented) The medical device according to Claim 13, wherein the material of the core comprises approximately 25%-50% iron.
- Claim 17. (Previously Presented) The medical device according to Claim 13, wherein the material of the core comprises approximately 52% cobalt, 10% vanadium and 38% iron.
- Claim 18. (Previously Presented) The medical device according to Claim 8, wherein the winding is made of copper.
- Claim 19. (Previously Presented) The medical device according to Claim 3, wherein the position sensor has an accuracy within approximately 0.5 mm.
- Claim 20. (Currently Amended) A medical device responsive to a generated external field comprising:
a body;
a position sensor at a portion of the body, the position sensor having
core made of a high permeable material, the material being a bi-stable magnetic material that produces a ~~magnetic field that switches polarity and causes a~~ substantially uniform voltage pulse upon an application of ~~an~~ the external field, the voltage pulse being used to ~~the position sensor providing signals that~~ determine location coordinates of the portion of the body.

- Claim 21. (Previously Presented) The medical device according to Claim 20, further comprising a winding circumferentially positioned around the core.
- Claim 22. (Currently Amended) The medical device according to Claim 20, wherein the location coordinates determined by the position sensor ~~is used to determine~~ comprise position coordinates.
- Claim 23. (Currently Amended) The medical device according to Claim 22, wherein the location coordinates determined by the position sensor ~~is also used to determine~~ further comprise orientation coordinates.
- Claim 24. (Previously Presented) The medical device according to Claim 20, wherein the position sensor maintains accuracy of ≤ 1 mm at temperatures greater than 75°C.
- Claim 25. (Previously Presented) The medical device according to Claim 24, wherein the position sensor maintains accuracy of ≤ 1 mm at temperatures at approximately 80°C.
- Claim 26. (Previously Presented) The medical device according to Claim 20, wherein the core has an outer diameter less than approximately 0.3mm.
- Claim 27. (Previously Presented) The medical device according to Claim 26, wherein the core has an outer diameter of about 0.25mm.
- Claim 28. (Previously Presented) The medical device according to Claim 27, wherein the winding is attached to the core.

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- Claim 29. (Previously Presented) The medical device according to Claim 28, wherein a combination of the core and the winding has an outer diameter less than approximately 0.5mm.
- Claim 30. (Previously Presented) The medical device according to Claim 29, wherein the combination of the core and the winding have an outer diameter of about 0.4 mm.
- Claim 31. (Previously Presented) The medical device according to Claim 30, wherein the material of the core comprises cobalt.
- Claim 32. (Previously Presented) The medical device according to Claim 31, wherein the material of the core further comprises vanadium.
- Claim 33. (Previously Presented) The medical device according to Claim 32, wherein the material of the core further comprises iron.
- Claim 34. (Previously Presented) The medical device according to Claim 33, wherein the material of the core comprises approximately 20%-80% cobalt.
- Claim 35. (Previously Presented) The medical device according to Claim 33, wherein the material of the core comprises approximately 2%-20% vanadium.
- Claim 36. (Previously Presented) The medical device according to Claim 33, wherein the material of the core comprises approximately 25%-50% iron.

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- Claim 37. (Previously Presented) The medical device according to Claim 33, wherein the material of the core comprises approximately 52% cobalt, 10% vanadium and 38% iron.
- Claim 38. (Previously Presented) The medical device according to Claim 28, wherein the winding is made of copper.
- Claim 39. (Previously Presented) The medical device according to Claim 23, wherein the position sensor has an accuracy within approximately 0.5 mm.
- Claim 40. (Previously Presented) The medical device according to Claim 20, wherein the material of the core comprises a copper, nickel and iron alloy (CuNiFe).
- Claim 41. (Previously Presented) The medical device according to Claim 20, wherein the material of the core comprises an iron, chrome and cobalt alloy.